Making education

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Making Education: Governance by Design

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In 1874 the English Home and Colonial School Society published *Hints on School Building* and stated in a section entitled 'The School Room. 1. Its influence':

> Teachers are so often engaged with subjects of instruction, methods of teaching, and other departments of school-work, as to overlook the importance of the school-room as a building, and in consequence bestow upon it little attention. This is a great mistake. A child is educated as much, and not infrequently more, by the circumstances in which it is placed as by any direct efforts on the part of parents or teachers (Reynolds 1874, 74).

Some seventy years later a group of American teachers concluded in as report about schooling in the State of Texas that:

> Teachers and educators in general understand that the school plant as a building that provides shelter from the weather ... It is of the greatest importance to them in their work to grasp the significance of the complete school plant as an instrument of education even greater in possibilities than text books and laboratory supplies ... The plant is a school for teaching; its value must be measured in terms of increased teaching effectiveness (quoted in Stillman and Cleary 1949, 40-41).

It should come as no surprise then that the international architect and lecturer Thomas Markus wrote in the late 1990s that

> ... [control] is in the buildings which were adapted or purpose built, the space thus created, and the material contents of this space – furniture and equipment . Above all, it is in the order imposed on the human bodies in this space, down to their tiniest gestures, including the gaze of the eyes (Markus 1996, 12).

Markus was writing about the material evidence of nineteenth century schools and how in the design there was a fixity of form and space and an emphasis on control of movement and visual surveillance. His reading of the school as a text was shaped by his concern with exploring the relationship between power and social process. For Markus, schools were social objects and as such also embodied Foucault's idea of disciplinary power. Schools were designed:

> ... to permit an internal, articulated and detailed control – to render visible those who are inside it; in more general terms, [the] ...architecture ... would operate to transform individuals: to act on those it shelters, to provide a hold on their conduct, to carry the effects of power right to them, to make it possible to know them, to alter them (Foucault 1977, 172).

Governance, in this sense was concerned with producing through design, what Foucault termed 'docile bodies,' it 'designated the way in which the conduct of individuals or of groups might be directed.' Architecture functioned as a disciplinary technology and within designed spaces 'secreted a machinery of control' (Foucault 1982, 221-2).

Of course, it is one thing to make claims for how design created and managed 'the human soul,' but how was this process made manifest? In terms of origins, Nikolas Rose has argued that the process was associated with the emergence of the human sciences and their 'conceptual systems ... their languages of analysis and explanations ..., the ways of speaking about human conduct that they constituted' which 'provided the means whereby human subjectivity could enter the calculations of authorities.' The subjective features of human life became elements 'within understandings of ... the prison, the school, the factory' and the 'new vocabularies provided by the sciences of psyche' enabled 'the aspirations of government to be articulated in terms of the knowledgeable management of the depths of the human soul' (Rose 1990, 7). Pedagogic techniques and disciplinary practices were developed as technologies of governance and thus, as David Hamilton noted, the modern classroom was invented, together with a teacher, furniture, texts and teaching aids, as a site of mass production and social efficiency (Hamilton 1989). Understanding how ideas about education and childhood circulated, had traction and became embedded in consciousness and professional action is important in helping us appreciate the genealogy of ideas, but we still need to see the evidence of control made real, we need to see and understand how design shaped the 'theatre of human activity' that was a school (Frankl 1914, 27)

Control made manifest: visualising the school*ed* body:

Place a child in a school and they are transformed into a school*ed* child. The development of a sense of the embodied self is dependent on an interaction with objects and other bodies: 'the body is ... where it all begins: as soon as one wonders what, where, or who one is, one looks to the body for the answers' (van Alphe 1993, 114). This interaction involves the child attending to the motions and posture required to perform specific tasks and roles. It is an experience which is sensory as the child absorbs information external to themselves. They inhabit the school/world intellectually, psychologically and physically through the experience of environmental encounter. Like a building the child's body is treated as an object to be dominated and controlled. The production of this school*ed* body was central to Jeremy Bentham's Panoptican, or Inspection-Architecture principle, for 'managing the poor.' Bentham proposed a design for a twelve sided Chrestomatic monitorial school (Fig 1.) which had seats for 900 boys taught by a single master surrounded by six pupil monitors and where through the use of 'a simple architectural contrivance' of a symmetrical schema pupils would be aware that they were under constant surveillance.

Bentham believed that the 'sentiment of an invisible omniscience' could not fail to 'materially improve the influence of the teacher in a seminary of instruction' and thereby the 'well being' of pupils (Gallhofer and Haslam 1996: 16-127; Markus 1993, 68-69). Bentham's Inspection-Architecture principle still remains a part of modern design (Fig 2.).

Fig 1: Bentham's Chrestomatic monitorial school

Fig 2: Classroom , Weoley Castle Nursery School, Birmingham 2001. Copyright Paulo Catrica

School stairs and corridors are designed to enable the child's movement; movement which is choreographed by architects. Stairs lift up bodies, or bring them down and design encourages particular positions to be adopted. The enclosing balustrades (or walls) of a flight of stairs 'control' the 'user's movement through the space, and the dimensions of the risers and treads strictly govern the cadence of gait' (Templar 1992, 23). Stairs with a landing offer the possibility of a space and time to pause. Regular patterns and routines of movement in effect make spaces familiar to children; they begin to inhabit and incorporate the space:

> Inhabiting is an act of incorporation; it is a situation of active, essential acquisition. Incorporation is the initiative of the active body, embracing and assimilating a certain sphere of foreign reality to its own body (Lang 1985, 202)

Architecture, as the American photographer Richard Ross visually argued in *Architecture of Authority* (2007) 'is not necessarily an innocent act of creativity'. A confessional in a Catholic Church, he argued, and an interview room at the Los Angeles Police Department headquarters 'share the same intimate dimensions. They are both uncomfortably tight spaces constructed to force people together, to extract a confession in exchange for some form of redemption' (Ross 2007, flyleaf). Ross' panorama of authoritarian imagery includes a photograph of the Montessori circle at the school his children attended. The white circle on the floor contradicts the open classroom approach of the Montessori method, As John MacArthur notes in an accompanying essay: 'Circle time can function not only as a summing up at the end of the day's activities but also as a kind of formal consent by the kids to being in school at all' and Ross 'seems to ask, not without irony: Does the circle have to be literally drawn to make the point about fitting into a system' (MaCarthur 2007, 10)

Fig 3: Stairwell [showing children moving]

Fig 4: Corridor [ditto]

Fig: 5: Toddler classroom, Montessori Center School, Goleta, California, copyright Richard Ross.

Texts of Authority and Control

Markus and Cameron (2002) have pointed to the influence of written texts in determining design and there is a long history of design guides either written by, or at least for, architects. These prescriptive guides were related to building types and the genre has flourished since 1800 (Markus and Cameron 2002, 32-36). The already mentioned *Hints on School Building* (1874) is an example of a 'model building type' based on pedagogy. Others guides were produced by architects with an established reputation for designing schools such as Henry Barnard in the United States in 1848 and E.R. Robson in England in 1874. Robson, the first architect of the London School Board, laid down a number of design rules for the new elementary schools in the capital following the Education Act of 1870. Essentially, all classrooms had to be entered from a central schoolroom, and boys and girls were to be segregated as much as possible. The plans of Wornington Road Board School, which he designed in 1874, illustrates these principles (Fig. x). The whole of the ground floor accommodation was devoted to infants and babies. Above the infants covered playground were two departments on separate floors, one for boys and one for girls. Each floor had its own central schoolroom and classrooms. There were separate playgrounds and entrances for boys and girls. The entrances were on different streets (Robson, 1874, 325-27). Robson's design ideas for the elementary schools drew on his extensive travels in Europe and North America in the 1870s (Burke and Grosvenor, 2012) and his authoritative guide *School Architecture. Being Practical Remarks on the Planning, Designing, building and Furnishing of School-Houses* (1874) includes over 300 woodcuts of school views, plans and educational furniture. The plans offer a catalogue of design ideas for organising school spaces and managing the movement and behaviour of pupils. It includes the plan of the Parish Gemeindeschule in the Kurfurstenstrasse, Berlin (Fig 6.) which Robson visited and we can see the same gender principles in operation with separate entrances, classrooms, corridors and stairs. The regulation and ordering of spaces was also associated with legislative texts. In England the *Minutes of the Committee of Council on Education* from 1840 onwards included type plans for schools and this tradition continued into the 20th century with official design guides being issued by the Ministry of Education between1949-1963. More recently, the James Review commissioned in 2011 recommended that all new school buildings in England 'should be based on a clear set of standardised drawings and specifications that will incorporate the latest thinking on educational requirements and the bulk of regulatory needs' and the drawings would cover 'the layouts and dimensions of spaces and walls, and details of how different materials and components will be fixed together' (James 2011, 52).

Fig 6: Plan of the Parish Gemeindeschule in the Kurfurstenstrasse, Berlin in*School Architecture. Being Practical Remarks on the Planning, Designing, building and Furnishing of School-Houses* (1874)

Managing emotions through design

In the decades immediately following the end of the First World War a shift occurred in the design of schools as architects increasingly saw themselves as agents of change in a partnership with educationalists. Frank Pick, who in the 1930s worked to bring industrialists, artists, craft workers and architects together in England to promote modernist principles in design, was particularly interested in the visual environment of schools and in a report on one of his school visits in Europe he wrote of a school, in Hilversum, Holland,

> Great attention has been paid to the influence of the environment on the child mind. The classrooms are admirably lit … and considerable use has been made of bright colour. In one room, for instance, he doors were painted green and the desks were treated in a number of harmonising colours (Barman 1979, 168-69).

Pick became the chair of UK Council for Art and Industry [CIA] and 1934 the Council commissioned research into schools buildings in Europe. For the CIA education was about '… providing "education for life", that is, at preparing children, not only for work, but also for all other things that go to make a full life …,' but it also held that 'Education must supply stage by stage a cultural background suited to these objectives.' The report concluded that '… children's surroundings, and the first impression thereby created in their minds, are important factors influencing their development and their outlook on life,' cited evidence received from teachers that the environment 'cramps the growth of artistic appreciation in poor children' and reports from Copenhagen, Geneva, Lausanne, Lyons, Rotterdam and Stockholm that 'bright harmonious [colour] schemes in schools stimulated children 'to appreciate colour and cleanliness' and provide[d] happier surroundings for school work' (Council for Art and Industry 1936, 7-11; Grosvenor, 2005, 515-18). In 1943 Herbert Read, the public intellectual, poet, art educator, literary critic and anarchist, dedicated the penultimate chapter of his *Education through Art* (1943) to the school environment. For Read,

> That the school should satisfy the requirements of scientific sanitation, ventilation and of hygiene generally, hardly needs to be mentioned. But aesthetics is also a science, and it should be no less a matter of course that the school should satisfy the simple laws which govern good proportions and harmonious colours. The school in its structure and appearance should be an agent, however unconscious in its application, of aesthetic education (Read 1943, 291).

Prototype models of such a school, he believed had already been realised in the UK and abroad and in particular he pointed to the Village College at Impington in Cambridgeshire as a school which provided 'the essentials of an educative environment,' not perfect in every detail, 'but practical, functional and beautiful' (Read, 1943, 292-93). The design of the school still works today and in 2015 was described as 'an exemplar of humanist modernism: an essay in genteel grandeur' (Bennett, 2015).

Fig 7: Village Impington College Cambridgeshire

Design is also about furnishing learning spaces and Amy Ogata, has documented how the work of Darell Boyd Harmon into how natural light varied in 1940s American classrooms led to new standards for lighting, colour and furniture design. Believing that optimal light would ameliorate classroom fatigue Harmon conducted experiments with different classroom designs to calculate the 'correct brightness ratio' between a 'localized visual task' and 'the entire field of vision' arguing that that light coming in over the left shoulder was bad for both posture and vision. A child looking at a blackboard involved the 'fusion of extrinsic agents (light, desk, sign,), forms of discourse (rules, tests, laws, norms) and physiological entities (eye, retina, optic nerve, brain, hands)'(Otter 2008, 245) and for Harmon improving the visual environment also related to classroom surfaces and he recommended the 'blackboard' should be 'yellow-green' in colour and that the desk surface be lightened from 'a dark oak "school brown" to a natural wood finish with an asymmetrical grain' (Ogata, 2008, 578-79; Mckie, 2011, 15)

Memory and testimonies of control and resistance

The Austrian author Stefan Zweig remembered his body being schooled, physically and mentally, in 1890s Vienna,

> As soon as we entered the hated school building we had to keep our heads down … to avoid coming up against the invisible yoke of servitude … To this day I have not forgotten the musty, mouldy odour clinging to that building … We sat in pairs, like convicts in their galley, on low wooden benches that made us bend our backs, and we sat there until our bones ached … the sole purpose of school in the spirit of those times was not so much to bring us on as to hold unless back, not to help us shape our minds but to fit us into the established mould with as little resistance as possible , not to enhance our energies but to discipline them … (Zweig 2009, 57)

For Walter Benjamin, a contemporary of Zweig, it was the discipline of the school bell and the indiscipline of the school stairways as a space that he remembered:

> … the bell …shrilly marked the beginning and end of lessons and breaks. The timbre and duration of the signal never varied. And yet how different it sounded at the beginning of the first and at the end of the last period – to circumscribe this difference would be to lift the veil that seven years of school cast ever more tightly over each of the days that composed them ... Between two peals of the bell lay the break, the second precipitating the shuffling, chattering uproar with which the mass of pupils, streaking through only two doors, surged up the narrow stairway from floor to floor. These staircases I … hated: hated when forced to climb them in the midst of the herd, a forest of calves and feet before me, defenselessly exposed to the bad odours emanating from all the bodies pressing so closely against mine … (Benjamin 1932, 338)

A century later, children were still identifying unregulated spaces such as corridors, stairways and toilets as noisy and threatening spaces, and at the same time asking for the provision of 'quiet spaces' for reflection, meditation and rest'(Burke and Grosvenor 2003; Burke, 2017).

Pupil's memories of schooling, and teachers' memories of teaching, are notoriously complicated (Cunningham 2000; Cunningham and Gardner 2004, Goodson, Moore and Hargreaves 2006) Testimonies, like all autobiographical texts, drape themselves across the space between history and fiction, but what such memories invariably illustrate is the impact that being produced as a schooled child has had on the emotions of individuals. As Benjamin recalled: 'I experienced the antiquated forms of school discipline – caning, change of seats, or detention – the terror and the pall they placed me under ... never lifted from me' (Benjamin 1932, 336)

Donald, usefully reminds us that mechanisms of control while 'designed ... [it] should not be assumed that ... [they] actually worked' (Donald 1992, 44). Power is always accompanied by resistance. Children have the capacity to organise and self govern in the face of a regulative regime as the 'poetic realism' of the film *Zéro de conduite* (1933) so brilliantly depicts (Vanobbergen, Grosvenor and Simon, 2014) and as Dave Douglass remembered of his schooling in the north of England in the 1960s, 'The school of the classroom was one of sullen resistance, or else electric struggle, clashing the desk lid, fifty at a time, rather instantly one after the other ... bang, bang, bang, before the teacher could even turn round.' (Douglass 1989, 49)

Fig. 9: The final frame of *Zéro de conduite*

'It is a sorry fact ... '

Markus has written of 'a building as a narrative' (Makcus 1993 5) and with that developing story can come problems as Stillman and Cleary noted in their book *The Modern School* (1949):

> It is a sorry fact ... that in the past educationalists and administrators have been too busy with their educational theories to be interested in the architectural problems which these evoked. They have required of architects buildings that would fulfil their latest theories, without pausing to remember that these theories, and therefore the buildings, would themselves be out of date in but a few year's time' (Stillman and Cleary 1949, 28-29)

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